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might point to the N'yassa as an argument against this view, it being a lake of such magnitude, and able to supply so large a river as the Shiré, though situated so far distant from the equatorial rains. This, however, only strengthens the case, and shows it must have connexion with that rainy zone either by being directly joined by a river to the Tanganyika, or else, which is much less likely, by a river coming round the Tanganyika; for otherwise it would be a rising and falling lake like Tchad.

In conclusion, as this subject is exhausted, I trust I may here be permitted to tender my humble acknowledgments and gratitude to the Society for the able and influential assistance they afforded me in procuring this knowledge, as well as for the indefatigable interest they displayed to succour and render the Expedition help in coming down the Nile. Without the influence of the President and Council of the Society with the Government I could not have started, from want of funds; I could not have obtained the services of my noble companion Captain Grant, whose meteorological registers, drawings, and botanical collections have added so much interest to the scientific world; nor, indeed, could I have gone myself unless they had obtained my services from the Indian Government.

J. H. SPEKE.

*Itineraries of the Second East African Expedition under the Command of CAPTAIN J. H. SPEKE. Computed by EDWIN DUNKIN, Esq., Greenwich Observatory.*

LATITUDES of STATIONS and ERRORS of the CHRONOMETER, from Observations made by CAPTAIN SPEKE, between Jiwa la M'koa and the Coast.

Station.	Month and Day.	Latitude S.	Object observed for Time.	Error of Chronometer on Local Time.
	1860.	° ' "		
Bagamoyo .. .. .. .. ..	Sept. 29	6 25 59	Antares	-5 36.2
,, .. .. .. .. ..	,, 30	..	⊕ LL	-5 28.5
,, .. .. .. .. ..	,, 30	..		-5 31.5
Bomaní .. .. .. .. ..	Oct. 3	6 30 44	⊕ LL	-4 20.2
Ikambürü .. .. .. .. ..	,, 4	6 33 49		
Kizoto .. .. .. .. ..	,, 5	6 38 29		
Kiranga Ranga .. .. .. ..	,, 6	6 42 49		
Muhugwe .. .. .. .. ..	,, 8	6 53 49		
Matamombo .. .. .. .. ..	,, 12	7 10 39		
Dégé la Mhora .. .. .. ..	,, 13	7 14 9		
Kidunda .. .. .. .. ..	,, 14	7 15 39		
Kiruru .. .. .. .. ..	,, 19	7 24 34	α Arietis	+ 56.4
,, .. .. .. .. ..	,, 19	..	,	+ 54.4

## LATITUDES of STATIONS and ERRORS of the CHRONOMETER, &amp;c.—continued.

Station.	Month and Day.	Latitude S.	Object observed for Time.	Error of Chronometer on Local Time.
	1860.	° ' "		
Duthumi*	.. .. .. .. ..	,, 21	7 24 13	$\alpha$ Arietis +1 36.7
„	.. .. .. .. ..	,, 21	..	+ 29.6
„	.. .. .. .. ..	,, 21	..	+ 30.8
Zungomero	.. .. .. .. ..	,, 23	$\alpha$ Arietis +6 23.4	
„	.. .. .. .. ..	,, 24	7 26 51	,, +1 2.7
„	.. .. .. .. ..	,, 24	..	+1 3.7
„	.. .. .. .. ..	,, 24	..	+1 3.4
„	.. .. .. .. ..	,, 24	..	+1 3.9
„	.. .. .. .. ..	,, 25	7 26 56	,, +1 12.3
„	.. .. .. .. ..	,, 25	..	+1 15.5
„	.. .. .. .. ..	,, 26	..	+1 32.1
„	.. .. .. .. ..	,, 26	..	+ (31.2)†
Kirengwe	.. .. .. .. ..	,, 28	7 32 17	
Makata	.. .. .. .. ..	Nov. 4	7 20 37	
Ngoto	.. .. .. .. ..	,, 5	7 13 54	
Muhanda	.. .. .. .. ..	,, 6	7 9 9	
Mbumi	.. .. .. .. ..	,, 11	6 56 30	
Manyonge	.. .. .. .. ..	,, 14	6 47 0	
Rumuma	.. .. .. .. ..	,, 15	6 46 29	
E. Ugogo	.. .. .. .. ..	,, 23	..	⊕ L L -2 26.1
„	.. .. .. .. ..	,, 24	6 31 12	
„	.. .. .. .. ..	,, 25	..	⊕ L L -2 13.0
„	.. .. .. .. ..	,, 25	..	-2 13.4
„	.. .. .. .. ..	,, 25	..	-2 11.5
„	.. .. .. .. ..	,, 25	..	-2 12.0
„	.. .. .. .. ..	,, 25	..	Aldebaran -2 8.8
„	.. .. .. .. ..	,, 25	..	-2 7.8
W. Kanyanye	.. .. .. .. ..	Nov. 30	..	Aldebaran -2 3.2
„	.. .. .. .. ..	Dec. 1	6 23 51	
Camp M'daburu Nullah	.. ..	,, 18	= 6 21 49	
„	.. ..	,, 18	..	Aldebaran + 40.5
„	.. ..	,, 18	..	+ 41.0
„	.. ..	,, 18	..	+ 41.3
„	.. ..	,, 20	..	⊕ L L +1 2.6
Camp. The Springs..	.. ..	,, 26	6 7 52	
The "Boss"	.. .. .. ..	,, 30	6 3 59	Sirius .. +4 25.1
		1861.		
Jiwa la M'koa	.. .. .. ..	Jan. 1	6 0 37	Procyon +5 28.5
„	.. .. .. ..	,, 3	..	+5 27.4
„	.. .. .. ..	,, 3	..	+5 29.2

\* The computations on this day were made in duplicate. There is nothing apparently to account for the discordant Chronometer error. The lunar was observed between the observations of  $\alpha$  Arietis.

† 1 minute wrong?

LONGITUDES of STATIONS between Jiwa la M'koia and the Coast, determined from Observations of Lunar Distances made by CAPTAIN SPEKE.

Station.	Month and Day.	Distances between	Resulting Longitude.	Mean.
Kiruru .. ..	1860.		° ' "	° ' "
Duthumi .. ..	Oct. 19	Moon and Mars ..	38 14 0	38 14 0
	,, 21	,, Arietis ..	38 14 30 (?)	
.. ..	..	.. ..	38 31 0 (?)	
Zungomero ..	Oct. 24	Moon and α Arietis	37 37 15	
,, .. ..	,, 24	,, α Aquilæ	37 33 45	
,, .. ..	,, 25	,, α ,	37 34 15	
,, .. ..	,, 25	,, α Arietis	37 40 15	37 36 45
,, .. ..	,, 25	,, Mars ..	37 39 45	
,, .. ..	,, 26	,, α Aquilæ	37 27 30	
,, .. ..	,, 26	,, Mars ..	37 44 30	
E. Ugogo .. ..	Nov. 25	,, ..	35 33 45	
,, .. ..	,, 25	,, ..	35 29 30	35 32 4
,, .. ..	,, 25	Fomalhaut	35 15 45	
,, .. ..	,, 25	Aldebaran	35 49 15	
W. Kanyanye ..	,, 30	,, Pollux (?)	.. ..	
,, .. ..	,, 30	Aldebaran	35 4 45	
,, .. ..	,, 30	,, ..	35 6 45	35 6 10
,, .. ..	,, 30	,, ..	35 7 0	
Camp M'daburu	Dec. 18	,, ..	34 40 30	
Nullah .. ..	,, 18	,, ..	34 51 45	34 50 8
,, .. ..	,, 18	,, ..	34 55 15	
,, .. ..	,, 18	,, ..	34 53 ..	
The "Boss" ..	,, 30	,, ..	34 18 30	34 18 30

*Note.*—The Tabular Distances have been corrected for the errors of the Lunar Tables.

For convenience of reference, the Longitude of the different Stations, determined from all the Lunar Distances observed, is extracted from the Abstract. The results are as follow:—

° ' "	° ' "
Kazé .. .. .. 33 1 34 E.	Masaka .. .. .. 31 33 15 E.
Mininga .. .. .. 32 39 50	Kibibi .. .. .. 32 9 45
M'bisi .. .. .. 32 23 15	Bandawarogo .. .. .. 32 44 30
Kagongo .. .. .. 32 6 30	Chaguzi W. of Pal. .. 32 19 49
Kariwamis .. .. .. 31 28 40	Faloro .. .. .. 31 50 45
Uthungü .. .. .. 31 28 30	Gondokoro .. .. .. 31 46 9
Wéranhanje .. .. .. 31 1 49	Island Point, W. of Sobat 31 24 0

The Latitudes of all the Stations can be easily seen by reference to the Abstract.

*Longitude of Kazé.*

Lunar Distances were observed on January 31, March 1, 2, and 3, 1861. The Chronometer errors used in the reductions are as follow:—

1861.			Kazé M. T.	M.	S.
Jan. 31	..	Observations of Aldebaran, at	.. 11° 53' P.M.	= + 12	11° 8
,,	..	α Orionis ..	.. 12° 35'	= + 12	14° 7
			12° 14'	= + 12	13° 3
March 1	..	..	20° 54 A.M.	= + 13	43° 9
,,	..	..	20° 43'	= + 13	44° 4
			20° 49'	= + 13	44° 2
March 2	..	..	20° 4 A.M.	= + 13	55° 8
,,	..	..	20° 46'	= + 13	56° 0
,,	..	..	21° 18'	= + 13	58° 2
			20° 43'	= + 13	56° 7
March 3	..	..	20° 53 A.M.	= + 14	0° 3
,,	..	..	21° 46'	= + 14	1° 5
			21° 20'	= + 14	0° 9

*Longitude deduced from the Distances.*

(Corrected for Error of Lunar Tables.)

1861.		H.	M.	S.	○	'	"	Weight.
Jan. 31	▷ to Jupiter ..	..	..	2 11° 23 E.	= 32	50	45 E.	2½
,, 31	„ Saturn ..	..	..	2 10° 48	= 32	42	0	3
Mar. 1	„ „ ○ ..	..	..	2 11° 46	= 32	56	30	11
„ 1	„ „ „ ..	..	..	2 13° 6	= 33	16	30	12
„ 1	„ „ „ ..	..	..	2 12° 4	= 33	1	0	5
„ 2	„ „ „ ..	..	..	2 11° 50	= 32	57	30	11
„ 2	„ „ „ ..	..	..	2 11° 51	= 32	57	45	11
„ 3	„ „ „ ..	..	..	2 12° 20	= 33	5	0	1
„ 3	„ „ „ ..	..	..	2 12° 43	= 33	10	45	1
„ 3	„ „ „ ..	..	..	2 12° 9	= 33	2	15	1
„ 3	„ „ „ ..	..	..	2 12° 37	= 33	9	15	5

Taking the mean of the above, giving weight proportional to the number of observations on each day, the concluded value becomes  $33^{\circ} 1' 34''$  E.

*Note on Jan. 31.*—“Dew very troublesome, but sky clear.” In the mean, I have given only *half* weight to the results on this day, the remaining observations having been made under more favourable circumstances.

LATITUDES and LONGITUDES of STATIONS near the SOURCE of the NILE, determined from Observations of Altitudes and Lunar Distances made by CAPTAIN SPEKE.

Station.	Year, Month, and Day.	Latitude.	Year, Month, and Day.	Longitude in Time.	Longitude in Time.	Longitude in Arc.	Adopted Longitude in Time.	Adopted Longitude in Arc.	Error of Chron. or Local Time from Obs. Altitudes.*	Approximate Time of Obs. for Chron. Error.	Variation of Compass.
Kazé	1861.	0 0 "	1851.	H. M. S.	H. M. S.	o " "	o " "	o " "	+14 53.5	8 53 A.M.	o "
Kazé	Mar. 2	5 0 52 S.	Mar. 14	..	..	..	..	..	+14 53.5	8 55	
"	"	..	" 14	..	..	..	..	..	+14 54.8	9 2	
"	"	..	" 14	..	..	..	..	..	+14 55.2	9 14	
Usagari	Mar. 20	4 49 33	..	..	..	..	..	..			
Unyambéwa	Sul-	..	22 4 40 19	..	..	..	..	..			
Untanat	..	..	..	..	..	..	..	..			
Mininga	..	27 4 18 34	Mar. 28	2 11 4 E.	..	..	..	..	+16 41.7	8 49	
"	..	27 4 18 37	Apr. 3	2 10 28	2 10 39.3 E.	32 46 0 E.	32 39 50 E.	32 39 50 E.	+18 2.3	9 35	
"	..	..	..	..	..	..	..	..	+18 4.3	9 38	
Mbissi	..	..	..	..	..	..	..	..			
Nimba	..	..	..	..	..	..	..	..			
Phinida	..	..	..	..	..	..	..	..			
Takina	..	..	..	..	..	..	..	..			
M'Yongas	..	..	..	..	..	..	..	..			
Ruhéné	..	..	..	..	..	..	..	..			
Mikambo	..	..	..	..	..	..	..	..			
Kayréné	..	..	..	..	..	..	..	..			
Makakas	..	..	..	..	..	..	..	..			
Lihméresis	..	..	..	..	..	..	..	..			
M'Wamba	..	..	..	..	..	..	..	..			
Kagongo	..	..	..	..	..	..	..	..			

- \* The error is on local time throughout.

LATITUDES and LONGITUDES of STATIONS near the SOURCE of the NILE, &amp;c.—continued.

Stations	Year, Month, and Day.	Latitude.	Year, Month, and Day.	Longitude in Time.	Adopted Longitude in Time.	Longitude in Arc.	Adopted Longitude in Arc.	Error of Chron. or Local Time from Obs. Altitudes.	Approximate Time of Obs. for Chron. Error.	Variation of Compass.
Wéranhanje ..	1861. o " "	1861. H. M. S.	Dec. 10 2 2 34 E.	30 38 30 E.	..	..	..	-16 14.2	9 6	o "
.. .. ..	.. .. ..	.. .. ..	.. .. ..	.. .. ..	.. .. ..	.. .. ..	.. .. ..	-31 51.1	8 43 A.M.	
Kitangile ..	.. ..	Jan. 15 1 16 40 s.								
Ndongo ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..			
Ngambezi ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..			
Kiswére ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..			
Nyagussa ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..			
Ukara ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..			
Merika ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..			
Sangwa ..	.. ..	.. ..	Feb. 1 0 30 47	Feb. 3 2 6 13	.. ..	.. ..	.. ..			
Masaka ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..			
Kitundú ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..			
Nakösi ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..			
Kibibi ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..			
.. .. ..	.. .. ..	.. .. ..	.. .. ..	.. .. ..	.. .. ..	.. .. ..	.. .. ..			
Nakaténa ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..			
N'yamagoma ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..			

Direct. 9 23 W.  
Reflector. 10 23

9 28 W.



LATITUDES and LONGITUDES of STATIONS near the SOURCE of the NILE, &amp;c.—continued.

Stations.	Year, Month, and Day.	Latitude.	Year, Month, and Day.	Longitude in Time.	Adopted Longitude in Time.	Longitude in Arc.	Adopted Longitude in Arc.	Error of Chron. or Local Time from Obs. Altitudes.	Approximate Time of Obs. for Chron. Error.	H. M.	H. M.	Variation of Compass.
										o	'	
Faloro	..	..	1862.	o ' "	1862.	H. M. S.	H. M. S.	o ' "	o ' "	..	..	..
	Dec. 4	3 10 33 N.	Dec. 11	2 8 14 E.	..	32 3 30 E.	32 3 30 E.	..	..	9 48 1	7 44 A.M.	
"	.. 14	3 10 41	"	11 2 6 47	..	31 41 45	31 41 45	..	..	9 48 6	8 11	
"	..	..	"	13 2 7 25	2 7 23 E.	31 51 15	31 50 45 E.	..	..	-12 39 1	8 17	
"	..	..	"	13 7 17	..	31 49 15	31 49 15	..	..	-12 41 2	9 3	
"	..	..	"	14 2 7 12	..	31 48 0	31 48 0	..	..	-14 34 1	8 22	
"	..	..	"	14 ..	..	..	..	..	..	-14 36 1	8 59	
"	..	..	"	17 ..	..	..	..	..	..	-17 5 1	7 59	8 22 W.
"	..	..	"	17 ..	..	..	..	..	..	..	..	8 11
"	..	..	"	30 ..	..	..	..	..	..	-32 59 7	8 35	
			1863.		Jan. 10	..	..	..	..	-49 1 6	8 26	
Panyoro	..	..	1863.									
Paira	..	..		Jan. 11	3 21 47							
Apaldo	..	..		" 13	3 25 27							
Madji	..	..		" 15	3 34 33							
Laburé	..	..		Feb. 5	3 47 15							
Mugir	..	..		" 8	3 59 56							
Marsig	..	..		" 11	4 7 1							
Doro	..	..		" 13	4 31 17							
				" 14	4 42 33							

## ADDITIONAL STATIONS.

HEIGHTS of STATIONS between KAZÉ and the COAST, from Observations made by Boiling-point Thermometer.

Station.							Height in feet. Therm. No. 2384.	Height in feet. Therm. No. 2389.	Mean.
<b>Zanzibar</b>							Negative result; owing probably to the want of accurate corresponding barometer reading.		
Kirūrū ..	..	..	..	..	..	..	268	256	262
Duthūmi ..	..	..	..	..	..	..	375	407	391
Zungoméro ..	..	..	..	..	..	..	440	591	516
Kirengué ..	..	..	..	..	..	..	724	654	689
Mbūiga, E. ..	..	..	..	..	..	..	1068	1068	1068
Mbūiga, W. ..	..	..	..	..	..	..	1066	1120	1093
Kikobogo ..	..	..	..	..	..	..	1717	1717	1717
Makata ..	..	..	..	..	..	..	1605	1605	1605
Ngoto ..	..	..	..	..	..	..	1673	1511	1592
Mūhanda ..	..	..	..	..	..	..	1675	1621	1648
M'yombo ..	..	..	..	..	..	..	1514	1514	1514
Mbūmi ..	..	..	..	..	..	..	1460	1414	1487
Mdunhūi ..	..	..	..	..	..	..	2040	2067	2054
T'zanzi ..	..	..	..	..	..	..	2501	2446	2474
Manyongé ..	..	..	..	..	..	..	2931	2986	2959
Rūmūma ..	..	..	..	..	..	..	2428	2488	2468
Marenga Mkhali ..	..	..	..	..	..	..	2875	2821	2848
Inenge ..	..	..	..	..	..	..	3633	3633	3633
E. Robého ..	..	..	..	..	..	..	4685	4739	4712
W. Robého ..	..	..	..	..	..	..	5010	5285	5148
Marenga Mkhali ..	..	..	..	..	..	..	2498	2498	2498
E. Ugogo ..	..	..	..	..	..	..	3136	3109	3123
E. Kanyenyé ..	..	..	..	..	..	..	2619	2729	2674
W.	..	..	..	..	..	..	2553	2607	2580
Usekhé ..	..	..	..	..	..	..	3342	3315	3329
Khoko ..	..	..	..	..	..	..	3160	3350	3255
1st Camp in Jungle ..	..	..	..	..	..	..	3408	3408	3408
3rd ..	..	..	..	..	..	..	3483	3539	3511
Mabungūrū ..	..	..	..	..	..	..	3758	3703	3731
"The Boss" ..	..	..	..	..	..	..	3702	3702	3702
Jiwa la Mkoa ..	..	..	..	..	..	..	4090	4090	4090
Mgongo Thembo ..	..	..	..	..	..	..	3991	3937	3964
Tūra, E. ..	..	..	..	..	..	..	3772	3609	3691
Tūra, W. ..	..	..	..	..	..	..	3651	3543	3597
Kigūe ..	..	..	..	..	..	..	3768	3661	3715
Rübūga ..	..	..	..	..	..	..	3362	3442	3402
Wali River ..	..	..	..	..	..	..	3442	3333	3388

### Kazé.

Thermometers.

Nos. .. .. ..	2384	2385	2386	2387	2388	2389
Height =	3578	3604	3604	3470	3604	3524

Mean for Kazé = 3564 feet.

*Note.*—The Tables used in the reduction are deduced from Regnault's 'Table des Tensions de la Vapeur d'Eau.'

Assumed Mean Barometer reading for level of sea 29.92 inches.

## HEIGHTS of STATIONS between Kazé and Gondokoro, determined by Observations of Boiling-point of Water.

Station.	Height in feet. Therm. No. 2384.	Height in feet. Therm. No. 2389.	Mean.
Iviri .. .. .. .. .. ..	3359	3359	3359
Usagari, S. .. .. .. .. ..	3251	3333	3292
N .. .. .. .. ..	3372	3453	3413
Unyambewa .. .. .. .. ..	3603	3776	3690
Ukumbi .. .. .. .. ..	3369	3608	3489
Mininga .. .. .. .. ..	3438	3438	3438
Ukani (1st Mbisu) .. .. ..	3351	3324	3338
(2nd Nunda) .. .. .. ..	3211	3318	3265
Ruhés in Bogwe .. .. .. ..	3209	3153	3181
Makakas .. .. .. .. ..	3286	3340	3313
Lumeresis .. .. .. .. ..	3408	3300	3354
Kagongo .. .. .. .. ..	3664	3390	3527
Kagera .. .. .. .. ..	3547	3629	3588
Ugombe .. .. .. .. ..	3469	3496	3483
2nd stage Usui .. .. .. ..	3989	3989	3989
3rd .. .. .. .. ..	3873	3873	3873
Mugandoo .. .. .. .. ..	3974	..	3974
Uthungu .. .. .. .. ..	4028	3974	4001
Kitare .. .. .. .. ..	4184	4223	4204
Vihembé .. .. .. .. ..	3509	3617	3563
Northern Usni .. .. .. ..	3473	3501	3487
Urigi .. .. .. .. ..	3461	3433	3447
Khonzé .. .. .. .. ..	3392	3392	3392
Uthenga .. .. .. .. ..	3903	3959	3931
Nyamwara Summit .. .. ..	4592	..	4592
Weranhaujé .. .. .. ..	4628	4693	4661
Banks of Little Windermere .. ..	3666	3612	3639
Bandawarogo .. .. .. ..	3369	3431	3400
Namaouja .. .. .. .. ..	3130	3076	3103
Urondogani .. .. .. .. ..	2865	2865	2865
Napoleon Falls .. .. .. ..	3308	3308	3308
Luluga S. Unyoro .. .. ..	2829	2883	2856
W. .. .. .. ..	2913	2898	..
100 feet above Kuruma Falls .. ..	2977	2977	..
.. .. .. .. ..	3062	3022	..
On the Nile at the Kuruma Falls .. ..	2970	2970	2970
Paira .. .. .. .. ..	1793	1793	1793
Gondokoro* .. .. .. .. ..	1298	1298	1298

\* Mr. Consul Petherick, on the 25th February, 1868, made the altitude of Gondokoro, by a mean of three observations, 1265 feet.—[ED.]

## MAGNETIC VARIATION observed by CAPTAIN SPEKE.

Date.	Stations.	Computed Azimuth.	Observed Azimuth.	Magnetic Variation.
1860.		°   '	°   '	°   '
Oct. 27..	Kirengwé .. .. .. .. ..	258 53	270 5	11 12 w.
,, 30..	Mbuiga .. .. .. .. ..	258 3	270 30	12 27
Nov. 11..	Mbumi .. .. .. .. ..	253 45	265 45	12 0
,, 23..	E. Ugogo .. .. .. .. ..	250 21	261 40	11 19
Dec. 20..	M'daburu Nullah .. .. ..	112 42	124 15	11 33
1861.				
Feb. 1..	Kazé .. .. .. .. ..	106 23	118 40	12 17
,, 1..	,, .. .. .. .. ..	106 25	118 15	11 50
,, 1..	,, .. .. .. .. ..	106 26	118 20	11 54
,, 1..	,, .. .. .. .. ..	106 28	118 25	11 57
,, 7..	,, .. .. .. .. ..	105 23	117 6	11 43
,, 26..	,, .. .. .. .. ..	96 45	108 55	12 10
Mar. 4..	,, .. .. .. .. ..	94 16	108 0	13 44
,, 8..	,, .. .. .. .. ..	92 40	104 30	11 50
,, 28..	Mininga .. .. .. .. ..	82 20	93 50	11 30
Apr. 8..	,, .. .. .. .. ..	76 16	88 20	12 4
Oct. 8..	Mwamba .. .. .. .. ..	94 50	106 10	11 20
,, 21..	N'yamanira .. .. .. .. ..	100 55	111 50	10 55
,, 21..	,, .. .. .. .. ..	101 15	112 20	11 5
Nov. 30..	Werahanje .. .. .. .. ..	242 57	254 10	11 13
,, 30..	,, .. .. .. .. ..	243 25	254 20	10 55
,, 30..	,, .. .. .. .. ..	243 42	254 30	10 48
1862.				
Feb. 3..	Masaka .. .. .. .. ..	108 6	117 30	Wire direct. 9 24
,, 3..	,, .. .. .. .. ..	108 16	117 40	Wire reflector. 10 24
,, 3..	,, .. .. .. .. ..	108 25	117 50	Wire direct. 9 25
,, 11..	Kibibi .. .. .. .. ..	251 37	261 5	9 28
Mar. 14..	Bandawarogo .. .. .. .. ..	93 10	103 0	9 50
,, 14..	,, .. .. .. .. ..	93 17	103 20	10 3
,, 14..	,, .. .. .. .. ..	93 22	103 25	10 3
Aug. 8..	Urondagani .. .. .. .. ..	71 37	81 40	10 3
,, 8..	,, .. .. .. .. ..	71 26	81 50	10 24
,, 8..	,, .. .. .. .. ..	70 46	81 15	10 29
Oct. 9..	Chaguzi .. .. .. .. ..	98 27	{ 106 35 } { 8 8 }	{ to to }
.. 17..	,, .. .. .. .. ..	101 35	110 45	9 10
.. 17..	,, .. .. .. .. ..	101 39	110 50	9 11
.. 17..	,, .. .. .. .. ..	101 42	111 0	9 18
Dec. 17..	Faloro .. .. .. .. ..	117 23	125 45	8 22
,, 17..	,, .. .. .. .. ..	118 49	127 0	8 11
1863.				
Feb. 17..	Gondokoro .. .. .. .. ..	106 57	115 40	8 43
,, 17..	,, .. .. .. .. ..	107 41	116 40	8 59
,, 17..	,, .. .. .. .. ..	108 19	117 15	8 56